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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,535	08/07/2000	KRZYSZTOF D. MALOWANIEC		1566

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EXAMINER

NORDMEYER, PATRICIA L

ART UNIT PAPER NUMBER

1772

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/509,535

Applicant(s)

MALOWANIEC ET AL.

Examiner

Patricia L. Nordmeyer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Withdrawn Rejections

1. The 35 U.S.C. 102(b) rejection of claims 22, 26 – 37, 40, 41, 44 and 45 as anticipated by Tapp in the paper dated October 21, 2004 is withdrawn due to the applicant's arguments in the paper dated February 22, 2005.

2. The 35 U.S.C. 103 rejection of claims 23 – 25, 38, 39, 46 and 47 over Tapp in view of Braun et al. in the paper dated October 21, 2004 is withdrawn due to the applicant's arguments in the paper dated February 22, 2005.

New Rejections

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22 – 37 and 44 – 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wahlquist et al. (USPN 4,379,192) in view of Morman et al. (USPN 6,117,803).

Wahlquist et al. disclose a composite material for forming a liquid-retaining layer in a

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hygienic article or a medical product (Column 2, lines 17 – 20) comprising a surface layer of substantially continuous staple fibers having a diameter of 12 microns (Column 13, lines 41 – 44), a second liquid impervious film layer (Column 3, lines 14, 15; Column 13, 21 – 22) and a third, core, layer of microfibers having a diameter of less than 10 microns (Column 13, lines 17 – 18) by a melt-blown process (Column 2, line 64 to Column 4, line 11), wherein the layers form a three-dimensionally penetrated surface structure such that the mean spacing between the top layer and film layer is less than the thickness of the layer sandwiched in between (Figures 3) with entanglement between the microfibers and continuous filaments (Column 4, lines 19 – 21) as in claim 22. As in claim 26, the film layer penetrates the three-dimensional surface structure of the core layer, staple fibers, (Column 3, lines 45 – 40). With regards to claims 27 – 29, the weight per unit of surface area of the composite material varies between 20 g/m^2 to 106 g/m^2 (Column 5, lines 14 – 18 ; Column 7, line 64 to Column 8, line 2). The microfibers have a weight per unit of surface area of 10 g/m^2 (Column 7, lines 65 – 68) as to claim 30. With regard to the staple fibers of claims 32 and 33, the weight per unit of surface area of the fibers varies between 10 g/m^2 and 51 g/m^2 (Column 5, lines 14 – 18). The thickness of the film layer is 15.2 to $40 \mu\text{m}$ (Column 1, lines 20 – 22) as in claims 34 and 35. However, Wahlquist et al. fail to disclose said third layer of microfibers being provided directly on the full surface of the side of said first layer of staple fibers remote from second film layer, the weight per unit of surface area of said microfiber layer is 4 to 6 g/m^2 , the liquid-retaining layer being in a disposable hygienic article, the hygienic article being one of a diaper, training pants, a sanitary napkin, a panty liner an in incontinence shield, the composite being used as a backing sheet, and wherein the microfiber layer is disposed on the outside of the backing sheet.

Morman et al. teach said third layer of microfibers being provided directly on the full surface of the side of said first layer of staple fibers remote from second film layer (Column 2, lines 64 to Column 3, line 8), the weight per unit of surface area of said microfiber layer is 4 to 6 g/m² (Column 2, lines 65 –67), the liquid-retaining layer being in a disposable hygienic article, the hygienic article being one of a diaper, training pants, a sanitary napkin, a panty liner or an incontinence shield (Column 4, lines 24 – 28), the composite being used as a backing sheet, and wherein the microfiber layer is disposed on the outside of the backing sheet (Column 4, lines 28 – 30) for the purpose of forming an outer surface of spunbound/meltblown layered material that is resistant to abrasion and snagging by sticks and hooked materials (Column 3, lines 28 – 32).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the microfiber layer as the outer layer on the composite material in a disposable hygienic article in Wahlquist et al. in order to form an outer surface of spunbound/meltblown layered material that is resistant to abrasion and snagging by sticks and hooked materials as taught by Morman et al.

Regarding claims 23 – 25, 36 and 37, Morman et al. teach the microfiber layer, the third or outside layer, to be made of fibers with diameters less than 10 µm for the purpose of having an outer cover that is abrasion resistant and snagging by sticks and hooked materials (Column 3, lines 28 – 32). Therefore, one of ordinary skill in the art through routine experimentation could determine the diameter of the fiber, which gives the retention or adhesion force of the hook material and tear strength of the composite material. The diameter of the microfibers is deemed

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to be a cause effective variable with regard to the retention or adhesion force of the hook material to the outside of the composite material and tear strength of the composite material. It would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such as diameter of the microfibers through routine experimentation in the absence of a showing of criticality in the claimed microfiber diameter. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

5. Claims 38 – 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wahlquist et al. (USPN 4,379,192) in view of Morman et al. (USPN 6,117,803) as applied to claims 22 – 37 and 44 – 47 above, and further in view of Tapp (USPN 5,169,712).

Wahlquist et al., as modified with Morman et al., discloses the claimed composite material for forming a liquid-retaining layer in a hygienic article or medical product. However, the modified Wahlquist et al. fail to disclose the film layer being breathable but liquid-proof, the second film layer being permeable to water vapor through the process of chemisorption, the second film having micropores for admitting water vapor, the micropores having a diameter of 0.2 to 10 μm , the film layer having micropores in at least some portion and the first and third layers also having micropores to form openings that extend through the composite material.

Tapp teaches film layer containing micropores in the film layer with diameters of 0.2 to 20 μm in a film layer (Column 11, lines 35 – 40) with a thickness of between 5 and 1000 μm

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(Column 16, lines 38 – 42) that allows the transfer of water vapor through chemisorption while being impermeable to liquid (Column 27, lines 43 – 47), wherein the fibers work in combination with the film layer to wick liquid from the surface of the composite material (Column 3, lines 18 – 20).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the porous film layer with micropores of 0.2 to 10 μm in the modified Wahlquist et al. in order to remove moisture away from the surface of the skin of the through the wicking abilities of the filaments and pores in the film as taught by Tapp.

Response to Arguments

6. Applicant's arguments with respect to claims 22 - 47 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,770,531 to Sudduth et al. and U.S. Patent No. 5,901,706 to Griesbach et al. are cited to show the state of the art in non-woven webs used in the fields of hygienic articles and medical products.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Nordmeyer whose telephone number is (571) 272-1496. The examiner can normally be reached on Mon.-Thurs. from 7:00-4:30 & alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patricia L. Nordmeyer
Examiner
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pln
pln

[Signature]
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

4/28/05